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IS 186 (1983): Cotton Mulls [TXD 31: Man-Made Fibres, Cotton and their Products]



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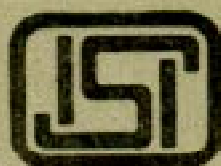
“Knowledge is such a treasure which cannot be stolen”

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Indian Standard
SPECIFICATION FOR
COTTON MULLS
(*Second Revision*)

UDC 677.21.064 MUL : 684.4.059.8 + 648.526



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INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard

SPECIFICATION FOR COTTON MULLS

(*Second Revision*)

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Indian Standard
SPECIFICATION FOR
COTTON MULLS
(*Second Revision*)

0. FOREWORD

0.1 This Indian Standard (Second Revision) was adopted by the Indian Standards Institution on 31 March 1983, after the draft finalized by the Cotton and Cotton Products Sectional Committee had been approved by the Textile Division Council.

0.2 This standard, originally published in 1951, was first revised in 1965. In this revision provision has been made for blending of man-made fibres subject to agreement between the buyer and the seller. This opportunity has also been availed to specify mild method for determining the scouring loss and to make the standard up to date in other respects.

0.3 *Standards of Weights and Measures Act*, 1976 stipulates the use of International Systems of Units in the country; in order to familiarize the industry with this system, the recommended SI units for use in the textile industry are given in Appendix A.

0.4 This standard contains clauses 3.3, 5.1, Table 1 (length, width) and Table 2 (Blend Composition), etc, which call for agreement between the buyer and the seller for permitting the buyer to use his option for selection to suit his requirements.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS:2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes the constructional details and other particulars of one variety of bleached cotton mulls. If agreed, man made fibres may be blended with cotton, but their percentage shall not exceed 40.

*Rules for rounding off numerical values (*revised*).

1.2 Cotton mulls are also used for polishing furniture and for cleaning the delicate machines.

1.3 This standard does not specify general appearance, feel, etc of the cloth (*see also 3.3*).

2. MANUFACTURE

2.1 Yarn — The yarn used in the manufacture of the mulls shall be satisfactory in evenness and reasonably free from neps and spinning defects.

2.2 Cloth — The cloth shall be free from dressing and filling materials and from substances liable to cause subsequent tendering. The cloth shall be mercerized.

2.2.1 The bleached cloth shall have a full bleach finish.

NOTE — The desired whiteness of the cloth shall be achieved only by imparting full bleached finish free from any blueing/whitening agents, if required by the buyer.

2.2.2 The cloth when visually examined shall be free from spinning, weaving and processing defects.

3. REQUIREMENTS

3.1 Constructional Particulars — The cloth shall conform to the requirements given in Table 1, excepting the count of warp and weft yarn which has been given only for guidance.

3.2 The chemical and other requirements of the cloth shall be as given in Table 2.

3.3 Sealed Sample — If, in order to illustrate or specify the indeterminable characteristics, such as general appearance, lustre, feel and shade of the cloth, a sample has been agreed upon and sealed, the supply shall be in conformity with the sample in such respects.

3.3.1 The custody of the sealed sample shall be a matter of prior agreement between the buyer and the seller.

4. MARKING

4.1 The cloth shall be marked with the following:

- a) Name of the material;
- b) Blend composition in the descending order, in case of blended fabrics;
- c) Length and width of the piece;
- d) Manufacturer's name, initials or trade-mark, if any; and
- e) Year of manufacture.

TABLE 1 CONSTRUCTIONAL PARTICULARS OF COTTON MULLS

(Clause 3.1)

	APPROXIMATE COUNT OF YARN, COTTON COUNT (tex)		ENDS/ cm	PICKS/ cm	MASS	BREAKING LOAD ON 5.0 × 20 cm STRIPS, Min		LENGTH	WIDTH	WEAVE	
	Warp	Weft				Warp	Weft				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)		
				g/m ²	N(kgf)	N(kgf)	m	cm			
	24s (25 tex)	30s (20 tex)	19	15	75	235(24)	145(15)	36 or above as agreed	91 or above as agreed	Plain	
5	Tolerance, percent	—	—	±5	±5	+5 -2.5	—	—	—	±2	—
	Method of Test	—	—	IS:1963-1981*	IS:1964- 1970†	IS:1969-1968‡		IS:1954-1969§		Visual	

NOTE — 1 N (Newton) is approximately equivalent to 0.102 kgf.

*Methods for determination of threads per decimetre in woven fabrics (*second revision*).†Methods for determination of weight per square metre and weight per linear metre of fabrics (*first revision*).‡Method for determination of breaking load and elongation at break of woven textile fabrics (*first revision*).§Methods for determination of length and width of fabrics (*first revision*).

**TABLE 2 CHEMICAL AND OTHER REQUIREMENTS
OF COTTON MULLS**

(Clause 3.2)

SL No.	CHARACTERISTIC	REQUIREMENT	METHOD OF TEST
(1)	(2)	(3)	(4)
i)	Scouring loss, percent, <i>Max</i>	2	IS:1383-1977* (Mild method)
ii)	pH value	6.0 to 8.5	IS:1390-1961† (Cold method)
iii)	Dimensional change (shrinkage or elongation), percent, <i>Max</i>	2.5	IS:2977-1964‡
iv)	Water solubles, percent, <i>Max</i>	1	IS:3456-1966§
v)	Ash content, percent, <i>Max</i> (after removal of water soluble matter)	0.5	IS:199-1973
vi)	Blend composition (for blended fabrics)	As agreed ± 3 percent	Relevant Indian Standard depen- ding upon the blend compo- sition

*Method for determination of scouring loss in grey and finished cotton textile materials (*first revision*).

†Method for determination of pH value of aqueous extracts of textile materials.

‡Method for determination of dimensional changes of woven fabrics (other than wool) on soaking in water.

§Method for determination of water soluble matter of textile materials.

||Methods for determination of moisture, total size or finish, ash and fatty matter in grey and finished cotton textile materials (*second revision*).

4.1.1 The cloth may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

4.2 At the other end of the piece, the cloth shall be marked with an identification mark.

5. PACKING

5.1 The cloth shall be packed in bales or cases in conformity with the procedures laid down in IS:1347-1972* or in IS:293-1967† as required.

6. SAMPLING

6.1 The scale of sampling and criteria for conformity as given in IS:3919-1966‡ shall be followed in respect of the physical characteristics, namely, ends and picks, mass, breaking load, length and width of the cloth.

6.2 The scale of sampling and criteria for conformity as given in IS:5463-1969§ shall be followed in respect of scouring loss; pH value, shrinkage or elongation, water solubles, ash content and blend composition (in case of blended fabrics) of the cloth.

*Specification for inland packaging of cotton cloth and yarn (*first revision*).

†Specification for seaworthy packaging of cotton cloth and yarn (*second revision*).

‡Methods for sampling cotton fabrics for determination of physical characteristics.

§Methods for sampling of cotton fabrics for chemical tests.

APPENDIX A

(Clause 0.3)

RECOMMENDED SI UNITS FOR TEXTILES

SL No.	CHARACTERISTIC	SI UNIT		APPLICATION
		Unit(s)	Abbrevi- ation(s)	
(1)	(2)	(3)	(4)	(5)
1.	Length	Millimetre	mm	Fibres
		Millimetre, centimetre	mm, cm	Samples, test speci- mens (as appro- priate)
		Metre	m	Yarns, ropes, cord- age, fabrics
2.	Width	Millimetre	mm	Narrow fabrics
		Centimetre	cm	Other fabrics
		Millimetre, centimetre	mm, cm	Samples, test speci- mens (as appro- priate)
		Centimetre, metre	cm, m	Carpets, druggets, <i>D U R R I E S</i> (as appropriate)
3.	Thickness	Micrometre (micron)	μ m	Delicate fabrics
		Millimetre	mm	Other fabrics, carpets, felts
4.	Linear density	Tex	tex	Yarns
		Millitex	mtex	Fibres
		Decitex	dtex	Filaments, filament yarns
		Kilotex	ktex	Slivers, ropes, cordage
5.	Diameter	Micrometre (micron)	μ m	Fibres
		Millimetre	mm	Y a r n s, r o p e s, cordage

SL No.	CHARACTERISTIC	SI UNIT		APPLICATION
		Unit(s)	Abbrevi- ation(s)	
(1)	(2)	(3)	(4)	(5)
6.	Circumference	Millimetre	mm	Ropes, cordage
7.	Threads in fabric:			Woven fabrics (as appropriate)
	a) Lengthwise	Number per centimetre	ends/cm	
		Number per decimetre	ends/dm	
	b) Widthwise	Number per centimetre	picks/cm	
		Number per decimetre	picks/dm	
8.	Warp threads in loom	Number per centimetre	ends/cm	Reeds
9.	Stitches in knitted fabric:			Knitted fabrics (as appropriate)
	a) Lengthwise	Courses per centimetre	courses/cm	
		Courses per decimetre	courses/dm	
	b) Widthwise	Wales per centimetre	wales/cm	
		Wales per decimetre	wales/dm	
10.	Stitch length	Millimetre	mm	Knitted fabrics, made-up items
11.	Mass per unit area	Grams per square metre	g/m ²	Fabrics
12.	Mass per unit length	Grams per metre	g/m	Fabrics
13.	Twist	Turns per centimetre	turns/cm	Yarns, ropes, cordage (as appropriate)
		Turns per metre	turns/m	
14.	Test or gauge length	Millimetre, centimetre	mm, cm	Fibre, yarn and fabric specimens (as appropriate)

SL No.	CHARACTERISTIC	SI UNIT		APPLICATION
		Unit(s)	Abbrevi- ation(s)	
(1)	(2)	(3)	(4)	(5)
15.	Breaking load	Millinewton	mN	Fibres, delicate yarns (individual or skeins)
		Newton	N	Strong yarns (individual or skeins), ropes, cordage, fabrics
16.	Breaking length	Kilometre	km	Yarns
17.	Tenacity	Millinewton per tex	mN/tex	Fibres, yarns (individual or skeins)
18.	Twist factor or twist multiplier	Turns per centimetre $\times$ square root of tex	turns/cm $\times$ $\sqrt{\text{tex}}$	Yarns (as appropriate)
		Turns per metre $\times$ square root of tex	turns/m $\times$ $\sqrt{\text{tex}}$	
19.	Bursting strength	Newton per square centimetre	N/cm ²	Fabrics
20.	Tear strength	Millinewton, newton	mN, N	Fabrics (as appropriate)
21.	Pile height	Millimetre	mm	Carpets
22.	Pile density	Mass of pile yarn in grams per square metre per millimetre pile height	g/m ² /mm pile height	Pile carpets
23.	Elastic modulus	Millinewton per tex per unit deformation	mN/tex/unit deformation	Fibres, yarns, strands

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INDIAN STANDARDS

ON

COTTON TEXTILES

IS:

- 171-1973 Grey cotton yarn (*second revision*)
- 174-1983 Flannelettes (*second revision*)
- 175-1979 Cotton bed sheets (*second revision*)
- 176-1965 Bed tickings (*revised*)
- 177-1977 Cotton drills (*third revision*)
- 178-1965 Cotton twills (*revised*)
- 179-1967 Dosuti (*second revision*)
- 180-1965 Cotton sheetings (*revised*)
- 181-1965 Leopard cloth (*revised*)
- 182-1983 Mazri (*second revision*)
- 186-1983 Cotton mulls (*second revision*)
- 187-1978 Long cloth (*second revision*)
- 188-1980 Cotton poplins (*second revision*)
- 293-1980 Seaworthy packaging of cotton yarn and cloth (*third revision*)
- 1066-1980 Code for packaging of sewing threads (*first revision*)
- 1143-1973 Cotton mosquito netting, square mesh (*first revision*)
- 1144-1980 Cotton cellular shirting (*second revision*)
- 1347-1972 Inland packaging of cotton cloth and yarn (*first revision*)
- 1423-1973 Cotton Garberdine (*first revision*)
- 1431-1973 Cotton mosquito netting, round mesh (*first revision*)
- 1535-1979 Cotton lining cloth, dyed (*first revision*)
- 1544-1973 Cotton calico (*first revision*)
- 1720-1978 Cotton sewing threads (*second revision*)
- 1803-1973 Cotton embroidery threads (*first revision*)
- 2413-1978 Cotton twine (*first revision*)
- 2422-1979 Cotton fabric dyed, water proofed (*first revision*)
- 2457-1979 Cotton umbrella cloth (*Water-proofed*) (*first revision*)
- 2613-1975 Cotton drill (non waterproofed) for umbrellas (*first revision*)
- 3040-1980 Indian kapok (*first revision*)
- 3566-1966 Viscose rayon cut staple (spun) yarn
- 3567-1966 Cotton yarn for covering conductors
- 4686-1980 Typewriter ribbon fabrics (*first revision*)
- 5088-1982 Textiles for ammunition (*first revision*)
- 5485-1980 Cotton yarn waste (*first revision*)
- 6612-1979 Unteased white cotton waste (*first revision*)
- 7056-1973 Cotton huckaback towels
- 7057-1973 Cotton turkish towels
- 7085-1973 Polyester cotton shirting
- 7104-1973 Popline (market variety)
- 7119-1973 Cotton cloth for *pagris* and *pags*
- 7851-1975 Wash and wear requirements of cotton fabrics
- 7866-1975 Blended yarn
- 9517-1980 Polyester blend suitings
- 9543-1980 Spun polyester sewing threads
- 9648-1980 Requirements for colour fastness of cotton textiles
- 10100-1982 Shrink resistance (or pre-shrunk) requirements of fabrics